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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,009	06/25/2003	Robert N. Blumenthal	1031.16081-CON	5727

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RYAN KROMHOLZ & MANION, S.C.  
POST OFFICE BOX 26618  
MILWAUKEE, WI 53226

EXAMINER

WACHSMAN, HAL D

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/606,009		BLUMENTHAL ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Hal D Wachsman		2857	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 42-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 42, 43 and 45-48 is/are rejected.
- 7) ☒ Claim(s) 44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6-25-03, 1-20-04</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

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1. The drawings have been approved by the Draftspersons. However, the Examiner objects to the drawings under 37 CFR 1.83(a) because the drawings must show every feature of the invention specified in the claims. Therefore, the method for determining a partial pressure of carbon monoxide in a gas atmosphere (see claim 42) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The Related Applications section on page 1 of the specification does not provide the current status of U.S. application serial no. 09/252,158. Appropriate correction is required.

3. The information disclosure statement filed 6-25-03 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each reference listed that is not in the English language. The two Weissohn non-patent literature references could not be considered because a concise explanation of relevance as described above was not provided

4. The listing of references in the specification (see page 14 of the specification) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but

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must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

5. Equation (6) on page 16 of the specification is objected to under 37 C.F.R. 1.52 because the numbers and the variable "T" lack sufficient clarity due to the very small size of the print. Appropriate correction is required.

6. Claims 43-48 are objected to under 37 C.F.R. 1.75(a) for not particularly pointing out and distinctly claiming the subject matter which the applicant regards as the invention. The preambles of all the dependent claims cite "A method..." however as there is already antecedent basis for "method" the preambles of claims 43-48 should cite "The method...". Claim 47, line 2, cites "further including outputting the deviation" but outputting the deviation to what exactly? The examiner asks the applicant to better claim the limitations cited above. While the examiner understands the intentions of the applicant he feels confusion could be drawn from the limitations cited above. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 42, 43 and 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admissions of the prior art in view of Gupta et al. (4,288,062).

As per claim 42, the Applicant's Admissions of the prior art (page 3 lines 23-29, page 4 lines 14, 15 of the specification) disclose "deriving from an oxygen sensor placed in situ...a sensed partial pressure of oxygen in the furnace". The Applicant's Admissions of the prior art (page 4, lines 2-6, 9, 10 of the specification) disclose "deriving from a temperature sensor...a sensed temperature in the furnace". The Applicant's Admissions of the prior art (page 4 lines 16-27, page 7, lines 14-31 of the specification) disclose "deriving, without using a carbon monoxide sensor outside the furnace, a computer partial pressure of carbon monoxide as a function of the sensed partial pressure of oxygen and the sensed temperature". It appears though that the Applicant's Admissions of the prior art does not clearly disclose "supplying the gas atmosphere at a fixed flow rate into a furnace". However, Gupta et al. (Abstract, col. 2

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lines 41-45, 61-64) teach this excepted feature. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Gupta et al. to the Applicant's Admissions of the prior art as specified above because as taught by Gupta et al. (col. 2 lines 25-28) the system permits accurate control of the atmosphere so that desired amounts of carbon are transferred to the surfaces of steel parts during a process such as carburization.

As per claim 43, the Applicant's Admissions of the prior art (page 2, lines 6-17, page 3, lines 27-35, page 4, lines 1-27, and page 7, lines 14-31, of the specification) disclose the feature of this claim.

As per claim 45, the Applicant's Admissions of the prior art (page 4, lines 16-27, page 7, lines 14-31, of the specification) disclose the feature of this claim.

As per claim 46, Gupta et al. (Abstract, col. 9 lines 2-14) teach the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Gupta et al. to the Applicant's Admissions of the prior art as specified above because as taught by Gupta et al. (col. 2 lines 25-28) the system permits accurate control of the atmosphere so that desired amounts of carbon are transferred to the surfaces of steel parts during a process such as carburization.

As per claim 47, Gupta et al. (Abstract, col. 9 lines 2-14) teach the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Gupta et al. to the Applicant's Admissions of the prior art as specified above because as taught by Gupta et al. (col. 2

lines 25-28) the system permits accurate control of the atmosphere so that desired amounts of carbon are transferred to the surfaces of steel parts during a process such as carburization.

As per claim 48, the Applicant's Admissions of the prior art (page 4 lines 16-27 of the specification) disclose the feature of this claim.

9. Claim 44 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and subject to the appropriate correction of the 37 C.F.R. 1.75(a) objections noted in paragraph 6 above.


10. The following references are cited as being art of general interest: Huth et al. which disclose a sensor for determining carbon monoxide, Schroeder et al. which disclose an oxygen partial pressure measuring means, a carbon dioxide measuring means and a carbon monoxide measurement means in a furnace and Bauer et al. which disclose calculating the absolute maximum partial pressure of carbon monoxide in a process for the decarburization of molten metal.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal D Wachsman whose telephone number is 571-272-2225. The examiner can normally be reached on Monday to Friday 7:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Hal D Wachsman  
Primary Examiner  
Art Unit 2857

HW  
February 19, 2004